

AMENDMENTS TO THE SPECIFICATION

Please replace the present title with the following amended title:

**MOBILE RADIO COMMUNICATIONS DEVICE AND RELATED METHOD FOR SAVING
POWER DURING MONITORING OF A BROADCAST CHANNEL USING BROADCAST
SCHEDULING INFORMATION OF OPERATION AND COMMUNICATIONS SYSTEM**

Please replace the paragraph starting at line 26, p.2 and continuing on p. 3 with the following amended paragraph:

As will be appreciated from the above, current operation of a MBMS arrangement requires monitoring of the notification channel in order to receive the information available and such continuous monitoring of the notification channel disadvantageously increases the power consumption required at the mobile radio communications device even when the actual MBMS transmission is arranged to take place later. Thus, in view of such continuous monitoring, it is currently not viable for MBMS enabled devices to enter into a power-saving mode such as the discontinuous reception (DRX) arrangement noted above.

Please replace the paragraph on p. 3, lines 6-9, with the following amended paragraph:

BRIEF DESCRIPTION

The present invention ~~for~~ [[can]] seeks to provide ~~for~~ a mobile radio communications device, related method of operation and related communications system arranged for use with a broadcast service ~~and~~ which have advantages over known systems as noted above.

Please add the paragraph on p. 3, immediately following the paragraph on lines 11-13:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a timing diagram showing the timing of the various events in transmission between a network and user equipment.

FIG. 2 is an illustration of a mobile device.

FIG. 3 is an illustration of a method of operating the mobile device of FIGURE 1.

Please replace the paragraph on p. 3, lines 15-27, with the following amended paragraph:

DISCLOSURE DETAILED DESCRIPTION OF THE INVENTION

~~According to one aspect of the present invention there is provided~~ With reference to FIGURE 2, a mobile radio communications device 40 is arranged for receiving a broadcast service 50 and ~~including~~ includes reception means 60 for reading a channel 62 to be employed by the broadcast service 50, means 64 for receiving otherwise than via the ~~[[said]]~~ channel 62 scheduling information 70 related to the broadcast service 50, means 72 for determining from the scheduling information 70 a start time of the broadcast service 50 on the channel 62, and means 74 for determining from the scheduling information 70 preparation time of the broadcast service 50 ~~that requires and requiring~~ transmission on the ~~[[said]]~~ channel 62 prior to the ~~[[said]]~~ start time of the broadcast service 50, and means 80 for inhibiting monitoring of the ~~[[said]]~~ channel 62 at the reception means 60 until a time determined by the ~~[[said]]~~ start time less the ~~[[said]]~~ preparation time.

Please replace the paragraph on p. 4, lines 6-7, with the following amended paragraph:

Preferably, the means 80 for inhibiting monitoring of the ~~[[said]]~~ channel comprises a software control means 82.

Please replace the paragraph on p. 4, lines 9-11, with the following amended paragraph:

The scheduling information can advantageously be retrieved from data of a service announcement phase ~~of data~~ 90 supplied to the device 40 or from other signaling levels 92.

Please replace the paragraph on p. 4, lines 16-27, with the following amended paragraph:

~~According to another aspect of the invention~~ With reference to FIGURE 3, there is provided a method 100 of operating a mobile radio communications device 40 arranged for receiving the broadcast service 50 and including: ~~the steps of~~
Step 110: reading a channel to be employed by the broadcast service,
Step 120: receiving, otherwise than ~~[[and]]~~ via the ~~[[said]]~~ channel, scheduling information related to the broadcast service,
Step 130: determining from the scheduling information the start time of the broadcast service on the ~~[[said]]~~ channel,
Step 140: determining from the scheduling information preparation time of the broadcast service, ~~[[and]]~~ which requires transmission on the ~~[[said]]~~ channel prior to the start of the broadcast service, and
Step 150: ~~further including the step of~~ inhibiting monitoring of the ~~[[said]]~~ channel until a time determined by the start time less the ~~[[said]]~~ preparation time.

Please replace the paragraph starting on p.4, line 29 and continuing on p. 5 with the following amended paragraph:

The present invention ~~[[can]]~~ therefore advantageously allows for a reduction in power consumption by allowing the mobile device 40 to operate without the need to read, for example, the MBMS notification channel 160 until the MBMS service 162 is about to commence.

Please replace the paragraph on p. 5, lines 9-13, with the following amended paragraph:

The invention is described further hereinafter, by way of example only, with reference to FIGURE 1 ~~the accompanying drawing~~ which is a timing diagram illustrating the scheduling information flow between User Equipment (UE) and a ~~[[rated]]~~ related network in accordance with an embodiment of the present invention.

Please replace the paragraph on p. 5, lines 15-20, with the following amended paragraph:

As noted above, the present invention proposes a reduction in power consumption within a mobile radio communications device 40 enabled for a reception of broadcast services and, in the illustrated example, such a service comprises MBMS 162. The control offered in accordance with the invention allows for the mobile device 40 not to read the MBMS notification channel 160 until the MBMS services are about to take place.

Please replace the paragraph starting on p. 5, line 22 and continuing on p. 6, with the following amended paragraph:

In order to determine the time at which monitoring of the notification channel should no longer be inhibited, ~~this described~~ an embodiment of the invention proposes the identification of

the start time ~~and~~ at which MBMS transmissions are to start on the channel and also, importantly, a parameter related to the preparation time within the Universal Terrestrial Radio Access Network (UTRAN) 170. The information relating to such preparation ~~[[and]]~~ time, as with the start time, maybe supplied to the mobile device during a service announcement phase ~~phrase~~. Within the device, the MBMS UTRAN preparation time identified is subtracted from the MBMS transmission start time in order to arrive at a time at which the mobile terminal should commence monitoring of the notification channel in order to receive all the required MBMS notification data.

Please replace the paragraph on p. 6, lines 15-22, with the following amended paragraph:

With regard to the parameter now identified as MBMS UTRAN preparation time, it is noted that such preparation time is generally required by the UTRAN for counting the number of mobile devices 180 within the MBMS service area and, in accordance with a particular advantage, the triggering of the counting procedure 182 can be initiated at the mobile device 40 allowing for the device 40 to trigger the uplink signaling 184 required for the aforesaid counting when the device 40 starts to read the MBMS notification channel 160.

Please delete the paragraph on p. 6, lines 24-26.

Please replace the paragraph on p. 6, lines 28-30, with the following amended paragraph:

~~BEST MODE FOR CARRYING OUT THE INVENTION~~

Turning now to FIGURE 1 ~~the accompanying drawing~~, ~~[[this]]~~ an embodiment of the present invention is described further.

Please replace first paragraph on p. 7, lines 2-5, with the following amended paragraph:

FIGURE 1 illustrates ~~As can be seen, the accompanying drawing comprises~~ a timing diagram relating to transmissions within a communications network 10 and between a network 12 and user equipment 14 such as a mobile phone.

Please replace first paragraph on p. 8, lines 4-7, with the following amended paragraph:

Subsequent to the start of the data transfer 18, data such as an MBMS bearer release 24 and the user equipment leaving signal 26 is transmitted between the network 12 and user equipment 14 ~~as illustrated in the drawing.~~